

### **REMARKS**

Applicants respectfully request the Examiner to reconsider the present application in view of the foregoing amendments to the claims and the following remarks.

#### ***Status of the Claims***

The Office Action is non-final. Claims 1-34 are currently pending in the present application. Claims 4, 12 and 13 have been withdrawn from further consideration as being drawn to a non-elected invention. Claims 1 and 2 have been amended to further clarify and define the invention by removing non-elected subject matter.

Based upon the above considerations, entry of the present Amendment is respectfully requested.

#### ***Claim Objection***

Claims 1-3, 5-11, 14-32 and 34 are objected to due to informalities. Applicants have amended claims 1 and 2 as described above. Since claims 5-11, 14-32 and 34 ultimately depend from claim 1, the above claim amendments resolve the objections as to these claims. Applicants respectfully request reconsideration and withdrawal of the present objection.

#### ***Issues Under 35 U.S.C. § 103(a), Obviousness***

Claims 1-3, 5-11 and 14-34 stand rejected under 35 U.S.C. § 103(a) as unpatentable over WO 02/090320 (hereinafter "WO '320"), in view of Key *et al.*, "Fluorinated Organics in the Biosphere," Environmental Science & Technology, Vol. 31, No. 9, pp. 2445-2454 (1997)

(hereinafter “Key”) and Hiyama, “Organofluorine Compounds: Chemistry and Applications, Springer-Verlag Heidelberg, New York (2000) (hereinafter “Hiyama”).

Applicants respectfully traverse this rejection.

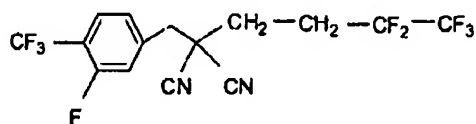
*Graham v. John Deere*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), has provided the controlling framework for an obviousness analysis. A proper analysis under 35 U.S.C. § 103(a) requires consideration of the four *Graham* factors of: determining the scope and content of the prior art; ascertaining the differences between the prior art and the claims that are at issue; resolving the level of ordinary skill in the pertinent art; and evaluating any evidence of secondary considerations (*e.g.*, commercial success; unexpected results). 383 U.S. at 17, 148 USPQ at 467.

M.P.E.P. § 2143 sets forth the guidelines in determining obviousness. But before the Examiner can utilize these guidelines, the Examiner has to take into account the factual inquiries set forth in *Graham v. John Deere*; *supra*. To reject a claim based on the above mentioned guidelines, the Examiner must resolve the *Graham* factual inquiries. MPEP § 2143. If the Examiner resolves the *Graham* factual inquiries, then the Examiner has to provide some rationale for determining obviousness, wherein M.P.E.P. § 2143 sets forth the rationales that were established in *KSR Int’l Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007). Applicants respectfully submit that the Examiner has not appropriately resolved the *Graham* factors, including the factors of determining the scope and content of the prior art and ascertaining the differences between the prior art and the claims that are at issue. Based on the following, Applicants maintain that the above-mentioned *Graham* factors actually work in Applicants’ favor. Additionally, Applicants submit that since the Examiner did not resolve the *Graham* factors, the rationale the Examiner provides for combining the cited references is improper.

Applicants respectfully submit that the presently claimed invention is unobvious over the cited references, for the following reasons.

Differences between the invention and the prior art

The Examiner asserts that the teachings of WO '320, in view of the Key reference, would have motivated a skilled artisan to add an additional CF<sub>2</sub> group in the following Compound 138 of WO '320:



and to replace the fluorinated phenyl ring with a CH<sub>2</sub> group to obtain the presently claimed compound. Applicants respectfully disagree with the asserted rationale presented by the Examiner.

With regard to the asserted motivation to add a CF<sub>2</sub> group in Compound 138, the Examiner based this on a single sentence within the Key reference that describes “the strength of the carbon-fluorine bond contribut(ing) to the stability of fluorinated molecules” (See Key, page 2445, column 2, lines 11-12).

Applicants contend, however, that the Key reference only explains the property of a C-F bond and does not state that an increased number of C-F bonds in a molecule results in increased stability of the molecule. Additionally, the Key reference makes no reference to the relationship between the number of C-F bonds in a molecule and the stability of the molecule.

Applicants submit that even if those skilled in the art considered the Key reference, they would not have come up with addition of a CF<sub>2</sub> group in Compound 138. Applicants contend

that it is even more unlikely that those skilled in the art would add a  $\text{CF}_2$  group that is to be bonded to  $\text{CH}_2$  in Compound 138 based on the Key reference.

Concerning the Examiner's asserted motivation of replacing, within Compound 138, the fluorinated phenyl ring with a  $\text{CH}_2$  group, this is based on a sentence within the Key reference that indicates "fluorinated aromatic compounds can be subjected to oxidative attack in aerobic environments, which yields transformation products" (*See* Key, page 2450, column 2, lines 5-8).

However, Applicants contend that this statement in the Key reference only refers to diflubenzuron (1-(4-chlorophenyl)-3-(2,6-difluorobenzoyl)-urea), which is completely different in its chemical structure from Compound 138 and the presently claimed compound. Applicants submit that those skilled in the art would not have been motivated to make the asserted replacement, and furthermore, the Key reference does not state what kind of group the fluorinated phenyl ring should be replaced with.

Therefore, based on the Key reference, the asserted substitution of a fluorinated phenyl ring in Compound 138 with a  $\text{CH}_2$  group is not obvious to those skilled in the art.

Regarding the Hiyama reference, the Examiner asserts that its disclosures including Table 1.10 would have motivated those skilled in the art to replace, within Compound 138, the  $\text{CF}_3$  group at the end of  $-\text{CH}_2\text{CH}_2\text{CF}_2\text{CF}_3$  with a  $\text{CF}_2\text{H}$  group. Applicants disagree.

Hiyama Table 1.10 only shows data on stabilities of a  $\text{CH}_3$  radical and substituted methyl radicals. Hiyama does not state the stabilities of chemical compounds. Furthermore, Hiyama does not state how the fluorinated phenyl ring of Compound 138 should be changed.

Since there is no teachings within Hiyama with regard to the above, Hiyama does not motivate the skilled artisan to replace the  $\text{CF}_3$  group at the end of  $-\text{CH}_2\text{CH}_2\text{CF}_2\text{CF}_3$  in a specific

compound with a CF<sub>2</sub>H group.

Applicants respectfully disagree with the Examiner that the present invention would be obvious to the skilled artisan. As described above, it is not obvious to those skilled in the art that the compound of the present invention is prepared from Compound 138 based on the combined teachings of WO '320, Key and Hiyama. Therefore, the present invention as claimed is distinguished over the combination of cited references.

In light of the above presently amended claims and remarks, because there is no disclosure, teaching, suggestion, reason or rationale provided in the cited references that would lead one of ordinary skill in the art to arrive at the instant invention as claimed, it follows that these references are incapable of rendering the instant invention obvious under the provisions of 35 U.S.C. § 103(a). Based upon the above, and applying the *Graham factors* analysis test, it is submitted that a *prima facie* case of obviousness has not been established.

Applicants respectfully request reconsideration and withdrawal of the present rejection.

***Issue Under the Obviousness-Type Double Patenting Doctrine***

Claims 1-3, 5-11 and 14-34 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 and 7 of U.S. Patent No. 7,011,838, in view of Key and Hiyama. Applicants traverse this rejection.

Applicants incorporate the above comments concerning WO '320, Key and Hiyama and respectfully submit that the presently claimed invention is unobvious and patentably distinct over claims 1-4 and 7 of U.S. Patent No. 7,011,838, in view of the above references.

Applicants respectfully request reconsideration and withdrawal of the present rejection.

**CONCLUSION**

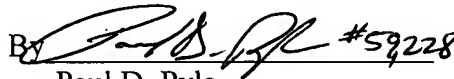
Applicants respectfully submit that all of the objections and rejections raised by the Examiner have been overcome, and that the present application now stands in condition for allowance.

Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact Paul D. Pyla at the telephone number below, in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized to charge payment or credit any overpayment to Deposit Account No. 23-0975 for any additional fees required under 37.C.F.R. §§1.16 or 1.17.

Respectfully submitted,

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